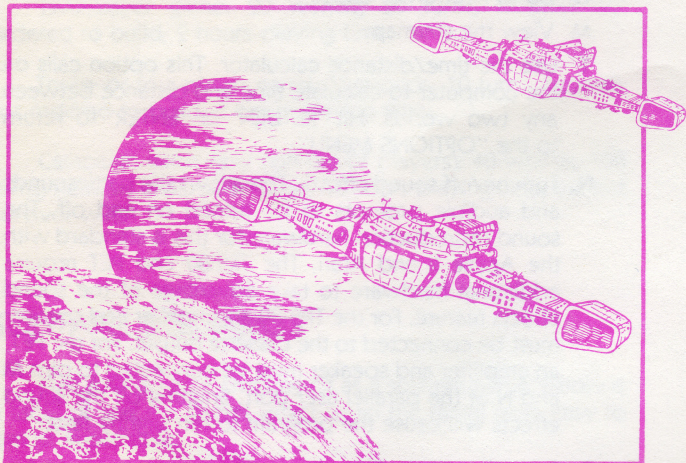


# galaxy

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FOR:  
TRS-80®, Level II 16K Cassette; 32K Disk  
PET®, 16K Cassette  
Apple II®, Applesoft® Basic, 16K beyond BASIC (Cassette)  
48K Apple® Disk  
Atari® 400 or 800, 16K Cassette; 32K Disk

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## INTRODUCTION

**GALAXY** is a game of interstellar exploration and conflict in the far future. From one to twenty players compete against each other and the computer in a struggle for control of up to forty star systems. Each solar system has one habitable, and perhaps occupied planet, called a "world." Each player starts with approximately 100 spaceworthy ships. The game proceeds in game turns, each of which represents one year.

## HOW TO WIN

To win in a solitaire game you must conquer the entire galaxy before the end of the game.

If two or more players are competing, the winner is the player who controls the most worlds at game's end.

## PROGRAM STARTUP

When the program begins, the computer will ask you a series of self-explanatory questions (number of players, number of stars, etc.). After this preliminary setup, a map of the galaxy will be displayed. Each division on the map represents a distance of one light-year. The locations of the stars are randomly assigned in each game, so every game is different. If the players so desire, the computer can be directed to generate a new galaxy. This process can be repeated until all the players are satisfied. It should be pointed out that the players on the fringes of the galaxy will start the game with more ships than those near the center, so there is little advantage in one star distribution over another.

NOTE: It may require as long as five to seven minutes for your computer to set up a very large game.

It is recommended that the players make a rough sketch of the galaxy for future reference.

## INDUSTRY AND SHIP SETUP

After the starmap has been approved, the computer will assign industrial capacity to each world. Each player's home world will receive 10 industry. The neutral worlds will receive a random number of industry from zero on up. The predominance of neutral worlds will have less than 5 industry.

The computer next assigns ships to the players' worlds. Each player can expect to receive approximately 100 ships, but those players close to opponents' worlds and/or far from neutral worlds can expect to receive more. In addition, a player with a very advantageous position in the galaxy can expect to receive considerably less than 100 ships.

Ships are assigned randomly to neutral worlds; some may have none, but others may have 20 or more. The number of ships assigned to a neutral world is partly dependent on the industrial capacity of that world.

The number of ships a neutral world has will not be known until the world is visited (attacked). The amount of industry will not be known until it is conquered.

When the computer completes this phase, the game begins.

## TURN SEQUENCE

### 1. Display Previous Turn's Results

The game will begin with the display of a table labeled "RESULTS FOR YEAR 0". This table will list all the worlds, who controls them, and the industry and ships at each player-controlled world.

In subsequent turns this table will reflect changes in control and numbers of ships. The number of industry at a world will never change.

Note that the table shows the PREVIOUS turn's results. Thus, if the display indicates "RESULTS FOR YEAR 7", this means that you are currently writing orders for turn 8.

### 2. Fleet Orders

Players will take turns in entering fleet orders, but the order of play will be randomly determined by the computer each round. There is no particular advantage in going first (or last).

Orders for sending out ships (as fleets) are in 3 parts:

- 1) The identifying symbol of the world the ships are coming from.
- 2) The identifying symbol of the world the ships are going to.
- 3) The number of ships being sent.

During the entry of 1) and 2) above, the keyboard is "live", i.e. it is not necessary to hit 'RETURN' or 'ENTER' after keying the world's identifying symbol. When keying in the number of ships, terminate the order by hitting 'RETURN' or 'ENTER'.

The identifying symbols for the worlds are the letters **A** through **Z**, plus some additional characters if there are more than 26 worlds in the game. Note that on games with over 26 worlds the "SHIFT" key must be employed along with the correct planet symbol in order to key in that planet.

Your fleet orders will be invisible as you key them in. This is done to maintain secrecy (the other players can't see what you're doing). It is wise to keep a written record of your orders.

Hitting the 'ESC' Key (↑) on the TRS-80 and the 'RVS' Key on the PET) during the order entry will switch you to the "OPTION MENU"—described later in these rules.

Once a fleet has been sent out, its orders cannot be retracted, and it will not be heard from again until it reaches its destination. A fleet will never encounter another fleet—it will only encounter the world it is sent to.



To terminate your turn, hit 'RETURN' or 'ENTER' when the computer requests "FROM WORLD:". Note that accidentally hitting 'RETURN' or 'ENTER' when it is not your turn will cause the next player to lose his turn, so care must be exercised. The penalty for this kind of mistake is whatever the other players decide; typically, the offended player is allowed to enter one order for the offending player's ships in the next turn of play.

### 3. Builds

After all players have entered their fleet orders, the computer will take over and will build one ship on each occupied world for each industry at that world. **IMPORTANT:** Neutral worlds will not build additional ships unless this option was selected in the initial game setup.

### 4. Movement

All fleets are moved automatically by the computer. In the first turn of movement (one turn = one year), a fleet will move a distance of 2 light-years, and in each subsequent year it will move 3 light-years. The distance between worlds is measured as true distance, for example, if World B is 5 light-years south and 3 light-years east of World S, the distance between them is 5.83 light-years, as calculated by the Pythagorean theorem. If the distance of the trip is 2 light-years or less, the fleet will arrive at its destination on the same turn as it was ordered. If the distance is more than 2 but no more than 5 light-years, the fleet will arrive on the following turn.

Included in the gamebox (beneath the plastic tray) is a log pad players may wish to use to help plan their game. Each row of the pad is intended to keep track of all ships sent from one planet (such as A) to one other planet (such as B). The traveling time (in game turns) can be recorded in the third column from the left. The columns to the right of the "TIME" column can be used to note the number of ships sent and the turns the ships are to arrive at the planet. See the examples below.

FROM	TO	TIME	NUMBER OF SHIPS SENT/TURN ARRIVING							
A	B	3	20	3	12	5	8	6		

### 5. Combat

When a fleet arrives at its destination, one of three things can happen:

- 1) If the world is controlled by the owner of the fleet, the world's defensive ships are reinforced by the ships in the fleet.
- 2) If the world has no defensive ships, the owner of the fleet automatically takes over the world.
- 3) If the world is controlled by another player or is neutral, and if there are ships on station at the world, combat occurs.

Each combat situation is a fight to the finish; no prisoners are taken. First, the defender fires. Each defensive ship gets one shot. Any surviving attackers fire on the defenders. All surviving defenders then fire on the attackers. This process is repeated until only one side survives, the survivor getting (or retaining) control of the world.

In each combat action a random "gunnery factor" is assigned to each side. The percentage of hits will depend on the gunnery factor and the relative sizes of the forces involved.

The defender has an advantage only in that he shoots first.

Separate fleets attack separately, even if they arrive at the same world on the same turn.

After completion of all combat, the turn (year) is over.

## OPTIONS MENU

When the 'ESC' Key is pressed ('↑' on the TRS-80; 'RVS' on the PET) during the fleet order entry, the "OPTIONS MENU" appears. This allows a player to execute any of the following options:

- G Go to fleet order entry.
- M View the starmap.
- T Use the time/distance calculator. This option calls on the computer to calculate time and distance between any two worlds. Hit 'RETURN' or 'ENTER' to return to the "OPTIONS MENU".
- N Turn on/off sound effects. This allows the battlesounds and audible prompts to be turned on and off. The sound reproduction hardware for this is standard with the Apple II and Atari. The TRS-80 and PET require additional hardware to take advantage of the sound effects feature. For the TRS-80 an amplifier and speaker must be connected to the cassette output. For the PET, an amplifier and speaker must be connected to pins M and N of the parallel user port. Shutting off the sound effects will cause the program to run slightly faster.
- S Save the game. This allows the current game to be saved on disk or tape. The game can then be re-entered at a later time.
- Q Quit the game. This allows you to drop out of the game. All of your worlds will become neutral, and all your fleets will be disbanded.
- E End the game. This brings the game to an immediate close. The computer will then announce the winner.
- C Change the number of turns in the game. This allows the players to extend or shorten the game.

## POLITICS AND DIPLOMACY

In games involving 3 or more players, wheeling and dealing can become an important factor. Players are free to make whatever deals, pacts and promises that they wish. They are also free to lie, back-stab and conduct vendettas. Let your conscience be your guide.

## ETIQUETTE

Although the Keys that are struck are not echoed on the screen, cheating may be possible by watching the user's fingers as he keys in his orders. This type of espionage is strictly forbidden, and other players should maintain a respectful distance while the current player is entering his fleet orders.

Players should formulate their fleet orders in advance rather than preparing them while they are at the keyboard. This speeds up the game considerably. Spending a long time contemplating one's move at the keyboard is considered bad form and is unworthy of a starship commander. A sketch of the star-map is helpful in preparing orders when away from the screen.



## MULTI-PLAYER SCENARIOS

Games of any length up to 100 years, any size up to 40 worlds, and any number of participants up to 20 players may be undertaken at the whim of the players. Below are some suggested setups that have been found to be quite playable.

Two-player game: 20 worlds; 20 turns; neutrals not ordered to build; 2 hours playing time.

Three- or four-player game: 15 worlds; 10 turns; neutrals not ordered to build; 2 hours playing time.

Campaign game (any number of players): 40 worlds; 100 turns; neutrals ordered to build; 10 hours playing time; the last survivor wins.

## SOLITAIRE SCENARIOS

**GALAXY** is quite challenging as a solitaire game. Below is a table of solitaire games which span the range from easy to almost impossible.

WORLDS	NEUTRALS BUILD?	TURNS	PLAYING TIME
10	NO	10	15 minutes
20	NO	13	30 minutes
30	NO	15	45 minutes
40	NO	17	60 minutes
5	YES	20	15 minutes
10	YES	35	45 minutes
20	YES	40	60 minutes
30	YES	45	90 minutes
40	YES	50	120 minutes

## CASSETTE LOADING INSTRUCTIONS

### ATARI 400/800

**GALAXY** is a two part load.

Lift the cartridge door on your ATARI 400/800 computer and insert the COMPUTING LANGUAGE BASIC cartridge into the computer. Use the LEFT CARTRIDGE slot on the ATARI 800 system.

Press the POWER switch on the side of the console ON. With SIDE ONE of the cassette up, put it into your ATARI CASSETTE RECORDER and press 'REWIND' until the tape stops moving. Using the keyboard, type:

**RUN "C:"**

then press the 'RETURN' key on the keyboard. You will hear one beep. Push 'PLAY' on the recorder and press the 'RETURN' key on the keyboard again. The recorder should start to move and the first part of the program will be loaded. When it has loaded, the AH logo then the title "GALAXY" will be displayed followed by another beep. Press the space bar or 'RETURN' key to load the second part of the program. By turning up the volume on your video screen you can hear the program being loaded. When the tape stops, the program has been transferred from the cassette tape to the computer. The game will begin automatically.

### APPLE II

The APPLE program is located on SIDE ONE after the Atari program. By listening to the tape, you can tell the difference between the two programs. The APPLE program is easily recognized by the relatively high pitch and 'pure' quality of the calibration tone at the beginning of the program. This tone is free of the characteristic Atari buzz. Find the beginning of the APPLE program and position the tape to just after the start of the calibration tone. Set up the recorder for input. On the keyboard, type:

**LOAD** (Don't hit 'RETURN' yet).

Press 'PLAY' on the recorder and immediately press 'RETURN' on the keyboard. The computer will start reading in your program. The computer will beep twice, once at the beginning of the program and once at the end. This program is not short and will take a few minutes to load. When you hear the second beep, type:

**RUN**

and press 'RETURN' to play the game.

### COMMODORE PET CBM

Turn the tape over so SIDE TWO is up. Insert the tape in your recorder and rewind to the beginning of the tape. When ready, type:

**LOAD**

and press the 'RETURN' button on the keyboard, then the 'PLAY' button on the recorder. The tape should start moving, and start loading your program. This program is not short, and will take several minutes to load. The computer will tell you when it finds the program and starts loading. When done, the computer will print 'READY', and the tape will stop. Type:

**RUN**

and press 'RETURN' to play the game.

### TRS-80

The TRS-80 program is located on SIDE TWO after the PET CBM program. By pulling out the EAR and MIC jacks on the recorder and listening to the tape, you can differentiate the PET program from the TRS-80 program. The PET sounds louder, yet has a lower pitch. The PET program lasts approximately 4½ minutes and is followed by a portion of blank tape which is your cue to prepare to load the TRS-80 program.

Check that the volume control is set to the proper level (between 5 and 6 is normal). Press 'PLAY' on the recorder, type:

**CLOAD**

(For Mod III only, enter: **L** after CASS?, then **CLOAD**)

and press the 'ENTER' key on the keyboard. The recorder should start to move and your program will be loaded. This will be indicated by the flashing asterisk at the upper right corner of the screen. This program is not short, and will take several minutes to load. When the tape stops and the TRS-80 prints 'READY' on the screen, type:

**RUN**

and press 'ENTER' to play the game.



## DISKETTE LOADING INSTRUCTIONS

### APPLE DISKETTE

**GALAXY** is designed to play on your Apple II with Applesoft. To play, insert the disk into your 3.2 or 3.3 Disk Drive and "boot" the system.

### ATARI DISKETTE

To load the Atari Diskette insert it into your disk drive. Turn on your disk drive and then the computer. The program will load and play automatically.

### TRS DISKETTE

To play, insert the disk into your disk drive and "boot" the system. Model III owners should refer to the conversion instructions enclosed.

### QUESTIONS ON PLAY

The clarity of these rules has been verified by **Software Testers of Universal Microcomputer Programmers (STUMP)** and deemed "**complete**" in all facets of instruction. Please re-read them in areas that seem unclear at first reading. Questions on play can be answered by the factory **only** upon receipt of a self-addressed envelope bearing first-class postage.

### IF YOU CANNOT LOAD THE PROGRAM

1. Check your equipment carefully to be sure that all cables and connections are correct.
2. Re-read the section in your computer's manual that tells you how to load software. Try to load software again.
3. If you can adjust the volume on your recorder, try different settings, both higher and lower.
4. If possible, load another program from a tape or disk you know works on your computer. This will prove that your equipment works. Try once more to load your game.
5. The normal reason software will not load is tape recorder or disk drive head misalignment. Your computer may be able to save and load programs on its own recorder, but be unable to read software made on a different recorder for this reason. Be sure your recorder heads are correctly aligned. Your local computer store or dealer can help you with this.
6. If the program still cannot be loaded, send the software, with a complete description of the problem (what type of computer you have, what the computer says, if anything, when you try to load the software or play the game, and what you did to try to get it to load.) to:

**Avalon Hill Microcomputer Games**  
4517 Harford Road  
Baltimore, Maryland 21214

Defective software will be replaced.

### After the program is loaded

Once you have your program loaded, it is a good idea to make a backup copy (for your own use). Follow the normal procedure for saving a program in your computer's manual.

### YOU NAME IT, WE'VE GOT A GAME ON IT . . .

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### CREDITS:

Game design and Apple II version: Tom Cleaver  
Atari version: Steve Hinkle and Dave Johnston  
PET version: Mark L. Whalen  
TRS-80 version: Rick McTeague, Grover Davidson,  
& Marco C. Mason  
Artwork: Charles Kibler  
Typesetting: Colonial Composition  
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